

IT Infrastructure Audit Worksheet

Introduction

The physical IT infrastructure is the layer of hardware and software products upon which IT networks, server and telecommunications rooms, and data centers are built. It consists of power protection, power distribution, IT racks, cabling and cable distribution, cooling, and cooling distribution, as well as the management systems that are in place to oversee and maintain this infrastructure. The purpose of this Audit Worksheet is to help you in identifying existing infrastructure components, and identify areas of potential vulnerability, or where improvement can be made.

Audit Information

Name: _____

Date: _____

Customer Company Name: _____

Customer Site Contact: _____

Contact Phone Number: _____

Contact Email Address: _____

1. Computer/Communications Room Environment

A. How would you describe the environment to be audited? (fill in # of each type of environment at this site)

_____ Closet (1-2 racks)

_____ Computer or communications room (3-10 racks/cabinets)

_____ Mid-size data center, computer or communications room (10-100 racks)

_____ Large data center (100+ racks)

_____ Other (description) _____

B. How many other sites does your IT/Communications network extend to? # _____

C. How would you classify this site? (check whichever apply)

Main data center

Redundant computer/data center

Disaster recovery

Regular office space

Other (description) _____

D. Do your other sites have physical IT infrastructure similar to this location?

Yes

No

If no, how are they different? _____

E. What mission critical applications/business processes are running in this environment?

- SAN (Storage Area Network)
- Email
- NAS (Network Attached Storage)
- VoIP
- E-commerce
- Order fulfillment
- Product development/research
- Production (manufacturing)
- Accounting/Admin
- Payroll
- ERP (Enterprise Resource Planning)
- Warehousing & Logistics
- Retailing (Store operations)
- Professional Services (legal, financial, consulting, etc.)
- CRM (Customer Relationship Management)
- Other, please specify: _____

F. What is the estimated cost if this environment were down for 1 hour? _____

G. What is the size of the closet/room? _____ sq ft

H. Does the closet/room have a raised floor?

- Yes
- No

If yes, is there adequate room under the raised floor for both air flow and future cabling requirements?

- Yes
- No

If no, please explain: _____

I. What is the ceiling height? _____ ft

J. Is there a dropped ceiling?

- Yes
- No

K. Are you experiencing equipment failures that are hard to explain?

- Yes
- No

L. Please complete the following:

	Current	Future
How many servers are in the room?	# _____	# _____
How many servers on the entire network?	# _____	# _____
How many switches are in the room?	# _____	# _____
How many switches are on the entire network?	# _____	# _____
How many racks are in the room?	# _____	# _____
How many racks are on the entire network?	# _____	# _____
How many desktop computers are on the network?	# _____	# _____

M. How confident are you that your current physical IT infrastructure will allow you to operate or 1 full day in the event of a blackout? (1=not at all confident, 2=somewhat confident, 3=totally confident, I'd bet my job on it.)

Rank: _____

N. How many single points of failure do you feel exist within your physical IT infrastructure today?

Please explain: _____

O. Do you have any concerns about the ability of your IT space to deal with higher power, and heat densities created by such things as blade servers?

Yes

No

If yes, please explain: _____

P. Do you own your building, or is it a leased space?

Own

Lease

If leased, remaining duration of the lease? _____ Months / Years

Q. When performing upgrades to your cooling or power infrastructure are you required to use a contractor of your facility manager's choosing?

Yes

No

2. Racks

A. Type of rack/cabinet:

_____ Enclosures: Height (U) _____ Width (") _____ Depth (") _____

_____ Open 4-post

_____ Open 2-post

i. Rack brand/vendor: _____

ii. Rack model: _____

iii. # of power receptacles per rack (average): _____

B. Type of power distribution system to racks (check one)

Overhead

Under raised floor

Other (description): _____

C. Is an electrician required each time you need to add new, or move existing power to your racks?

Yes

No

D. Are there enough outlets for existing/additional equipment in the rack?

Yes

No

E. Do you feel you are implementing good rack hygiene?

Use of blanking panels consistently? Yes No

Cable management being utilized consistently? Yes No

Insuring no hot-air recirculation through the 5 overflow fault areas? Yes No

3. Power

- A. How would you describe your existing UPS configuration?
- Centralized UPS
 - Point of use (deploying as and where needed)
- B. How would you describe the design of your UPS system(s)?
- # _____ N (system comprised of a single UPS system)
 - # _____ N+1 (system comprised of parallel redundant UPS modules)
 - # _____ 2N (2 separate power paths to load, each protected by a UPS fully rated to maintain total load of environment)
 - # _____ 2N+1 (2 separate power paths to load, each protected by an N+1 UPS that is fully rated to maintain total load of environment)
- C. How many UPS(s) do you have in the following watt ranges?
- _____ 0-3,000 watts
 - _____ 3,001 to 5,000 watts
 - _____ 5,001 to 10,000 watts
 - _____ 10,001 to 20,000 watts
 - _____ 20,001 to 40,000 watts
 - _____ 40,001 to 80,000 watts
 - _____ 80,001 + watts
- D. What brand of UPS(s) do you currently use? (list all) _____
- E. What model of UPS(s) do you currently use? (list all) _____
- F. What is the average age of the UPS(s)? (estimate, years) _____
- G. How many of the UPS(s) are currently out of warranty? _____
- H. Have you previously replaced batteries in your UPS(s) on site?
- Yes
 - No
- If Yes, how long ago was this performed? (years/months) _____ / _____
- I. Do you wait for the UPS to notify you of battery replacement requirements before performing this type of maintenance work?
- Yes,
 - No
- If No, please explain: _____
- J. What is the estimated load of IT equipment that needs UPS protection (add up wattage of all equipment from information on equipment name plates, look at electrical panel providing power to the IT load, etc)?
- K. In the event of a power outage, how much runtime will your current UPS(s) provide for your networking/server environment? _____ Minutes
- L. How much runtime would you ideally like too have? _____ Minutes

M. Have your UPS(s) or batteries ever failed under power failure conditions?

Yes

No

If yes, please explain: _____

N. Is the location backed up by a generator?

Yes

No

If yes:

i. What is the capacity of the generator(s) _____ Qty _____ watts

ii. What is the total current load on the generators? _____ watts

iii. How much time does it take the generator to start up in the event of a power outage? _____ Minutes _____ Seconds

iv. How much runtime will the generator deliver in the event of a power outage
_____ Hours _____ Minutes

4. Cooling

A. Is there an existing cooling solution in the closet or room?

Yes

No (if no, skip to section 5B)

If Yes:

i. Is the cooling solution dedicated to the computer room or part of the building A/C system? _____ Dedicated _____ Building system

ii. Cooling system brand/manufacturer: _____

iii. Age of cooling system: _____ Years

iv. Type of cooling system (check all that apply) _____ Floor mount _____ Ceiling mount _____ In-Row _____ Portable spot cooling

v. Is the cooling system SNMP manageable? Yes No

B. Are the racks/cabinets in the computer/communications room laid out in rows set up in a hot/cold aisle configuration?

Yes

No

If yes, are cooling units located perpendicular to the aisles?

Yes

No

C. Are blanking panels used to help with airflow in areas of cabinets where no equipment is installed?

Yes

No

D. Is your cooling solution backed up by a generator?

Yes

No

E. In the event that the public water supply is shut down, do you have a backup water supply to feed your cooling system

Yes

No

5. Environmental Monitoring & Management

- A. What is your current strategy for managing your physical IT infrastructure across your network?
- Centralized SNMP management utilizing a network management tool, i.e. HP Openview, Tivoli, etc.
 - Vendor proprietary management system, such as APC PowerChute, Eaton Power Xpert, etc.
 - Manual checks of equipment via a regular maintenance program
 - Utilization of a building management tool, such as Johnson Controls, or equivalent
 - No management strategy in place for monitoring physical IT infrastructure
- B. What is your current strategy for monitoring and managing the health of your UPS batteries?
- Centralized SNMP management utilizing a network management tool, such as HP OpenView, Tivoli, etc.
 - Vendor proprietary management system such as PowerChute Plus, Eaton Power Xpert, etc.
 - Manual checks of equipment via a regular maintenance program or equivalent
 - No management strategy in place for monitoring physical IT infrastructure
- C. What is your current strategy for monitoring the temperature of your room/racks?
- Monitor temperature of the room via local thermostat
 - Remotely monitor temperature of the room
 - Monitor temperature of individual rack via a thermostat
 - Remotely monitor temperature of the individual racks
 - Don't really monitor – utilize ad hoc maintenance or other program
- D. What is your current strategy for managing access/security?
- Remotely manage door sensors
 - Room-level security such as key lock, retina scan, punch card
 - Remotely managed locks on racks
 - No strategy in place

6. Service

- A. Are you concerned about the quality of service on your physical IT infrastructure?
- Yes
 - No
- B. Are you concerned about the cost of service on your physical IT infrastructure?
- Yes
 - No
- C. What is the length of the current service contract on your UPSs? _____ Years
- D. When will the current service contract expire? _____ / _____ (month/year)

7. Future Plans

- A. Have you a plan in place to address the possible need for flexibility and adaptability in your physical IT infrastructure based on unpredictable changes/growth in your IT environment?
- Yes
 - No
- B. Are you planning to move to a new location within 5 years?
- Yes
 - No
 - Maybe

